

Objective: You will be showing your comprehension of major cell functions by using Pictures that YOU draw. Make sure you use all of the organelles that you are given in each function. You MUST use color and you must label and explain each function when you are done

DRAWING #1

Pretend you are a Plant Cell and the sun just started to shine quite brightly in your general direction. You need to Photosynthesize and start making sugar. You are going to use CO₂ that came from the atmosphere and is sitting just outside of your cell. You are also going to use water that is already inside of the cell. Your cell is going to make sugar inside of the Chloroplast and then transport the sugar out of the cell into Sieve Tubes so that it can be transported Down to the Root Cells. Sieve Tubes in a plant serve as the transport system much as the Veins and Arteries work in animals. They transport fluids inside the plant like blood is transported in an animal.

You will need to include the following Organelles and Cell parts in your drawing:

Chloroplast, Vesicle, Cell Membrane, Cell Wall, Sieve Tube, Membrane Pores and Plasmodesmata.

Your drawing must show the following processes:

- 1- CO₂ entering the cell through Membrane pores and Plasmodesmata of Cell Wall
- 2- CO₂ traveling to the Chloroplast through Cytoplasm
- 3- CO₂ entering the Chloroplast
- 4- H₂O entering the Chloroplast
- 5- CO₂ and H₂O becoming Sugar 
- 6- O₂ being Produced as a waste product
- 7- O₂ leaving the Chloroplast
- 8- O₂ Leaving the Cell Membrane and Cell Wall
- 9-  Sugar Leaving the Chloroplast via Vesicle
- 10- Sugar traveling to Cell Membrane
- 11- Sugar Entering Sieve Tube from Cell for Transport

DRAWING #2

Problem: Imagine that a cell just received a message from the blood (hormone) that told the Pancreatic cell that You just ate a snack that contained sugar. Basically you now have too much sugar in your blood.

Solution: Your cell is a Pancreas cell that makes the protein Insulin and gets them into the blood stream so that they can start helping to lower the blood sugar.

Your Picture must show the creation of a protein from start to finish. You must include all of the cell parts that would be used in the process, and then list all of the steps in the process on the paper.

List all of the cell parts etc. that must be used in the creation of this protein:

List all of the steps that must be followed to create the protein below...

1- (I will help by giving you the first step)...DNA making copies of itself (RNA). You should have at least 11-12 more steps

The final step should be the protein entering the blood stream!